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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/807,580	04/13/2001	Albert Hasper	NEDER24.001A	2074

20995 7590 01/03/2002

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EXAMINER

FOX, CHARLES A

ART UNIT	PAPER NUMBER
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3652

DATE MAILED: 01/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/807,580

Applicant(s)

HASPER ET AL.

Examiner

Charles A. Fox

Art Unit

3652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 8-14 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Drawings

The drawings are objected to because drawings 1a-1c are not labeled as prior art as they are cited as being in the specification. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign mentioned in the description: reference number 4 is not shown in figure 2 as stated in the specification. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Applicant is required to submit a proposed drawing correction in reply to this Office action. However, formal correction of the noted defect may be deferred until after the examiner has considered the proposed drawing correction. Failure to timely submit the proposed drawing correction will result in the abandonment of the application.

Specification

The disclosure is objected to because of the following informalities:

The specification refers to claim 1 as part of the disclosure on page 1 line 4. As claim 1 is cancelled the specification is indefinite as to what material claim 1 may have encompassed. The practice of referring to claims in the specification should not be used, and any reference to a claim in the specification should be replaced with a written

description of the subject matter of the referenced claim. No new matter should be entered into the specification.

Appropriate correction is required.

Claim Objections

Claim 13 is objected to because of the following informalities:

The words "cassette/handling" should be changed to read "cassette handling". A space, not a slash should be between the two words.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8,9 and 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Ozawa et al. in view of Iwasawa et al. Regarding claim 8 Ozawa et al. (US 5,474,410) teaches a wafer process system comprising:

a housing (not numbered);

a part (41) for receiving at least two wafer cassettes (c);

a wafer handling device (42) in communication with wafers (w);

wherein the wafer handling device (42) is adapted to move wafers (w) into and out of a first cassette (c) and to and from a second cassette (c). Ozawa et al. do not teach the apparatus as having a store for cassettes or a device for moving cassettes.

Iwasawa et al. (US 4,867,629) teaches a store (110) for cassettes in a housing (124) with a cassette handling device (120) for moving the cassettes between the storage chambers (92) and a transfer location. Iwasawa et al. further teach the store (110) as being separated from any other system that it may be a part of.

It would have been obvious to one of ordinary skill in the art, at the time of invention that the cassette store and transfer device taught by Iwasawa et al. could have been combined with the wafer transfer device taught by Ozawa et al. in order to automate the transfer of cassettes from the store to the sorting device in a controlled environment, therein speeding up the process time as well as increasing protection against contamination of the wafers being handled.

In regards to claim 9 Ozawa et al. further teach that the wafer handling device is arranged in a chamber (40) that can be sealed off with respect to the housing.

In regards to claim 12 Iwasawa et al. further teaches that the store (110) has a rotatable magazine. It would have been obvious to one of ordinary skill in the art, at the time of invention that the store could contain a rotatable magazine as the use of a rotatable magazine was well know in the art at the time as saving floor space over other types of magazines as well as simplifying operation of the store.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ozawa et al. in view of Iwasawa et al. as applied to claim 9 above, and further in view of Prentakis. Ozawa et al. in view of Iwasawa et al. teach the limitations of claim 9 as above, they do not teach a measuring device in the wafer-handling chamber. Prentakis (US 4,775,281) teaches a wafer handling apparatus (10) with a device (54) for

measuring the angular orientation of a wafer being transported. It would have been obvious to one of ordinary skill in the art, at the time of invention to add the measurement capabilities taught by Prentakis to the apparatus taught by Ozawa et al. in view of Iwasawa et al. in order to make sure the wafers were in the proper orientation during movement between cassettes as well as being in the proper alignment in the cassettes.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ozawa et al. in view of Iwasawa et al. as applied to claim 8 above, and further in view of Rush et al. Ozawa et al. in view of Iwasawa et al. teach the limitations of claim 8 as above, they do not teach the cassette receiving part as being a turntable. Rush et al. (US 5,193,969) teach a device with a turntable (12) for holding at least 2 wafer cassettes (34) . It would have been obvious to one of ordinary skill in the art, at the time of invention that the cassette holding place taught by Ozawa et al. in view of Iwasawa et al. could be modified by adding the turntable taught by Rush et al. in order to have more cassettes available to the wafer handling device while decreasing the amount of space needed for the cassette placement area.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasawa et al. in view of Ozawa et al. teaches a method of assembling a batch of wafers in cassettes comprising the steps of:

placing at least a first and second cassette in active connection with a cassette handling device, wherein the cassettes are located within a store;

employing a cassette handling device to select and move a first and a second cassette from the store to a transport station in an independent manner.

Iwasawa et al. do not teach moving the cassettes directly to a sorting chamber, or employing a wafer handler to move the wafers from one cassette to the other. Ozawa et al. teach the method of moving wafers comprising the steps of:

placing a first and second wafer cassette into a wafer handling chamber;

employing a wafer handler to transfer wafers from one cassette to the other.

It would have been obvious to one of ordinary skill in the art, at the time of invention to combine the wafer handling methods taught by Ozawa et al. with the cassette handling methods taught by Iwasawa et al. in order to have a combined method that is controlled by a unitary controller as well as doing away with any intermediary steps needed if the two methods were not combined.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasawa et al. in view of Ozawa et al. as applied to claim 13 above, and further in view of Rush et al. Iwasawa et al. in view of Ozawa et al. teach the limitations of claim 13 as above, they do not teach the step of testing wafers during sorting. Rush et al. teach the step of testing wafers for angular alignment during handling of the wafers.

It would have been obvious to one of ordinary skill in the art, at the time of invention that the measuring step taught by Rush et al. could enhance the methods taught by Iwasawa et al. in view of Ozawa et al. by verifying the angular position of all wafers before placing them back into a cassette for transport to another process, therein saving time by having the wafers properly oriented before arriving at the next station.

The prior art made of record and not relied upon, but considered pertinent to applicant's disclosure is: Stark et al. (1990) and Garric et al. (1995).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles A. Fox whose telephone number is 703-605-4294. The examiner can normally be reached between 7:00-4:30 Monday-Thursday and on alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen D. Lillis can be reached at 703-308-3248. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

caf
December 20, 2001


EILEEN D. LILLIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600